



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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December 22, 1993

Robert E. Covington  
Consultant for  
Ziegler Chemical & Mineral Corp.  
P.O. Box 1845  
Vernal, Utah 84078

Re: Cowboy #1 Federal Lease Revision/Amendment to the Mine Plan, Ziegler Chemical & Mineral Corp., M/047/013, Ziegler Gilsonite Mines, Uintah County, Utah

Dear Mr. Covington:

The Division has completed a review of your draft amendment submission received December 6, 1993, and the second addendum received December 14, 1993. These submissions have been reviewed as a document which is meant to stand alone as a part of the existing Ziegler Gilsonite Mine Plan. After reviewing the information submitted, the Division has the following comments which will need to be addressed before approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. This formatting will help expedite our review process.

As a general comment, this submission contains several typographical errors which are not a cause for concern except when the errors cause an entirely different meaning. We can provide you with additional information describing the errors we have found in the submission if you desire. After the permit amendment has been finalized and approved, we would like one corrected and complete version of the amendment package. We suggest submitting the final and corrected volume in a three-ring binder or similar system which will allow easy insertion of revised pages.

**R647-4-105 Maps, Drawings & Photographs**

**105.2 Surface facilities map**

A border clearly outlining the acreage proposed to be disturbed by mining operations over the life of the mine is not included in the drawings submitted. Please provide a drawing showing the proposed disturbed area. (AAG)



### **105.3 Drawings or Cross Sections (slopes, roads, etc.)**

The second addendum includes a verbal description of a typical "coffin cap" shaft closure. This description calls for 4" x 4" x 4' timbers to be placed over the shaft opening, 3/4" plywood is then nailed over the timbers covering the opening with 1 foot of overlap on all sides, this is then covered with reinforced concrete 12' in thickness.

We believe there are several typographical errors in this section of this addendum. The shaft opening is described as being 5' 4" across. In order to span the opening and support the 1' of plywood overlap, these 4" x 4" timbers will need to be at least 7' 4" in length. The concrete is assumed to be 12" thick instead of 12' thick. This design description still lacks some information such as: (1) is the concrete thickness measured from the top of the plywood or elsewhere? (2) what is the size and spacing of the metal reinforcement in the concrete? (3) what is the width of the concrete overlapping the ends of the timber/plywood? (4) will soil be graded around the edge of the concrete closure to blend in with the terrain? Please comment on our assumptions and provide the additional closure design information verbally, or with a drawing of a typical "concrete coffin cap" shaft and escapeway closure. (AAG)

## **R647-4-106 Operation Plan**

### **106.2 Type of operations conducted, mining method, processing, etc.**

Our interpretation of this submission is that information contained in the Addendum supersedes information contained in the body of the proposal. Also, information in the Second Addendum may supersede the First Addendum. Please confirm or negate this interpretation. (AAG)

In the Second Addendum, Ziegler proposes to leave a 35 foot barrier between the mine workings and the surface to prevent subsidence. What is the basis for selection of this barrier size (MSHA requirements, subsidence calculations, practical experience, etc.)? (AAG)

### **106.3 Estimated acreages disturbed, reclaimed, annually?**

The proposal contains conflicting figures for disturbed areas for a typical shaft setup. The addendum is believed to supersede the acreage figures in the proposal, however, the addendum also contains conflicting figures for the disturbed areas (see the attached sheet 'Calculation of Disturbed Areas').

Please provide an estimate of the surface disturbance for a typical shaft setup which includes: the shaft area; the hoist house area; the compressor house area; the generator house area; the access road(or area) joining the shaft-hoist-compressor-generator; the ore loadout road; the wasterock pile; the topsoil stockpile; the two escapeways; the roads to the escapeways; the storage area for the wooden stulls; the access road from the existing road to the mine site; and the access road along the vein if this is not included in a previous item. You may provide an itemized list of these disturbed areas, or lump several items into generalized areas. In either case, please identify which facilities or features are included in each disturbed area figure. (AAG)

#### **106.4 Nature of materials mined, waste & estimated tonnages**

We believe there is an error in the ore tonnage calculation on page 3-A of the Second Addendum. Our calculations lead to 221,484 tons instead of 361,607 tons. Also, our calculations do not support an overall extraction rate of 90%. Please check your calculations for these figures. (AAG)

### **R647-4-107 Operation Practices**

#### **107.4 Deleterious material safely stored or removed**

Please describe the means of storage for the diesel and propane to be kept onsite. (AAG)

#### **107.6 Concurrent reclamation**

The proposal indicates the each old shaft site will be reclaimed as soon as the facilities are relocated to the new shaft site. The Division encourages this type of concurrent reclamation. Please be advised that Division rules require a period of up to three growing seasons after seeding a reclaimed area before the disturbed area can be completely released. (AAG)

### **R647-4-109 Impact Assessment**

#### **109.1 Impacts to surface & groundwater systems**

The submission does not contain information describing the depth to ground water in the proposed mining area. Please provide information describing the ground water depth in the proposed mine areas. (AAG)

**109.4 Slope stability, erosion control, air quality, safety**

The submission states that soil erosion will be minimal to non-existent. Please provide some information to explain why erosional impacts at the mine site(s) will be minimal. (AAG)

**R647-4-110 Reclamation Plan**

**110.1 Current & post mining land use**

The submission did not define the post-mine land use for the disturbed areas. What is the post-mine land use for these areas? (AAG)

**110.5 Revegetation planting program**

The Division will defer to the BLM's reclamation seed mix recommendations, unless otherwise requested. The Division recommends all compacted areas, such as new roads and pads, be ripped at least 12 inches deep as part of the reclamation treatments. (AAG)

**R647-4-111 Reclamation Practices**

**111.8 All roads & pads reclaimed**

The proposal does not describe the disposition of the concrete pads (airlift pad) at each shaft site (i.e., placing in the old shaft, burying, etc.). Please describe the treatment of these concrete pads at the time of final reclamation. (AAG)

**R647-4-112 Variance**

No variances have been requested in this proposal.

**R647-4-113 Surety**

The reclamation surety estimate provided in this submission cannot be verified by the Division until clarification of the disturbance figures has been provided by Ziegler. The concurrent reclamation proposed by Ziegler is encouraged by the Division. However, in our estimate of the reclamation costs, we would use a worst case scenario for the amount of area disturbed at any one time. According to the Division rule R647-4-111 (13.11), a reclaimed area is not considered released from reclamation

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responsibilities until 70% of the pre-mining vegetative cover is achieved. Also, the vegetation has to have survived three growing seasons.

We are aware that a bond is currently in place with the BLM in order to secure the federal lease. The Division will recognize a bond posted with the BLM which is assigned solely to the reclamation of disturbances associated with the lease area(s). (AAG)

**R647-4-115 Confidential Information**

The Division will keep the information identified as confidential in a separate file, which is not available to the public. (AAG)

Thank you for your patience and cooperation in completing this permitting action. Please contact me or Anthony Gallegos of the Minerals staff should you have questions or concerns in responding to these requirements.

Sincerely,



D. Wayne Hedberg  
Permit Supervisor  
Minerals Reclamation Program

jb  
cc: Allen Vance, State Office BLM  
Pete Sokolosky, Vernal District BLM  
Lowell Braxton, DOGM  
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